

## PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY  
(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference 4313-4005PC1	<b>FOR FURTHER ACTION</b>		See item 4 below
International application No. PCT/US2004/020427	International filing date ( <i>do not write year</i> ) 24 June 2004 (24.06.2004)	Priority date ( <i>do not write year</i> ) 27 June 2003 (27.06.2003)	
International Patent Classification (8th edition unless other edition indicated) See relevant information in Form PCT/ISA-237			
Applicant BIOREST LTD.			

1.	This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 <i>bis</i> Hex.		
2.	This REPORT consists of a total of 9 sheets, including this cover sheet.		
In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.			
3.	This report contains indications relating to the following items:		
<input checked="" type="checkbox"/>	Box No. I	Basis of the report	
<input checked="" type="checkbox"/>	Box No. II	Priority	
<input checked="" type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	
<input type="checkbox"/>	Box No. IV	Lack of unity of invention	
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step and industrial applicability, citations and explanations supporting such statements	
<input type="checkbox"/>	Box No. VI	Certain documents cited	
<input type="checkbox"/>	Box No. VII	Certain defects in the international application	
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application	
4.	The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis 2(c) and 93bis.1 but not, except where the applicant makes an express request under Article 28(2), before the expiration of 30 months from the priority date (Rule 14bis.2).		

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Telephone No. +41 22 740 10 35	Date of issuance of this report 03 January 2006 (03.01.2006)
	Authorized officer  Beate Giffo-Schmitt  Telephone No. +41 22 338 87 30

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 4313-4005 PCT1	<b>FOR FURTHER ACTION</b>		see Form PCT/ISA/220 as well as, where applicable, form S below.
International application No. PCT/US2004/020487	International filing date (day/month/year) 24/06/2004	(Earliest) Priority Date (day/month/year) 27/06/2003	
Applicant BJOREST LTD.			

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

## 1. Basis of the report

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. 1.

2. ☒ Certain claims were found unsearchable (See Box II).

3. ☐ Unity of invention is lacking (see Box III).

4. With regard to the title,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

RECEIVED BY AUTHORITY  
DATE 1/9 BY [Signature]

5. With regard to the abstract,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 32.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regards to the drawings,

- a. the figure of the drawings to be published with the abstract is Figure No. 1



as suggested by the applicant.



as selected by this Authority, because the applicant failed to suggest a figure.



as selected by this Authority, because this figure better characterizes the invention.

- b. ☐ none of the figures is to be published with the abstract.

## NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the PCT Applicant's Guide, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions respectively.

### INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the letter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only.

#### What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

#### When?

Within 2 months from the date of transmittal of the international search report or 15 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

#### Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been/is filed, see below.

#### How?

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Administrative Instructions, Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

#### What documents must/ may accompany the amendments?

Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

## NOTES TO FORM PCT/ISA/220 (continued)

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (a being understood that identical indications concerning several claims may be grouped), whether

- (i) the claim is unchanged,
- (ii) the claim is cancelled,
- (iii) the claim is new,
- (iv) the claim replaces one or more claims as filed,
- (v) the claim is the result of the division of a claim as filed.

The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

1. [Where originally there were 48 claims and after amendment of some claims there are 51]:  
"Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers; claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
2. [Where originally there were 15 claims and after amendment of all claims there are 11]:  
"Claims 1 to 15 replaced by amended claims 1 to 11."
3. [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:  
"Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or  
"Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
4. [Where various kinds of amendments are made]:  
"Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

### "Statement under article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

It must be in the language in which the international application is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

### Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the same time of filing the amendments with the International Bureau, also file a copy of such amendments with the International Preliminary Examining Authority (see Rule 62.2(a), first sentence).

### Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, where upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see Volume II of the PCT Applicant's Guide.

# INT<sup>TM</sup> NATIONAL SEARCH REPORT

International Application No.

PCT/US2004/020487

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K9/127 A61K31/663

According to International Patent Classification (IPC) or to both national classification and IPC:

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data bases consulted during the international search phase of data base and, where practical, search terms used:

EPO-internal, WPI Data, PAJ, CHEM ABS Data, EMBASE, BIOSIS, MEDLINE

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Indication to claim No.
X	US 6 139 871 A (HOPE MICHAEL J ET AL) 31 October 2000 (2000-10-31) page 1, line 10 - line 33	1-5, 9-12
Y	US 2002/192157 A1 (LOW PHILIP S ET AL) 19 December 2002 (2002-12-19) page 5 - page 6; example 3 page 7; example 10 claims 1-19	6-8
Y	DE 196 37 890 A (MAX PLANCK GESELLSCHAFT) 19 March 1998 (1998-03-19) the whole document	6-8

-/-

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are referred to.

### Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*B\* earlier document but published on or after the international filing date
- \*C\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another claim(s) or other special reason (as specified)
- \*D\* document referring to an oral disclosure, use, exhibition or other means
- \*E\* document published prior to the international filing date but later than the priority date claimed

- \*F\* prior document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*G\* document of particular relevance: the claimed invention cannot be considered novel or obvious as distinguished by involve an invention step which the document is taken away
- \*H\* document of particular relevance: the claimed invention cannot be considered to involve an invention step when the document is compared with use or more other such documents, such combination being obvious to a person skilled in the art
- \*I\* document member of the same patent family

Date of the actual completion of the international search

7 December 2004

Date of mailing of the international search report

15/12/2004

Name and mailing address of the ISA

European Patent Office, P.O. Box 1, 5101 Postbus 2  
NL - 2200 HV Rijswijk  
Tel: +31-70 340-2040, Fax: +31 651 690 01,  
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Authorized officer

Muller, S

## INTF NATIONAL SEARCH REPORT

International Application No

PCT/US2004/020487

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
Y	<p>MONKKONEN J ET AL: "Studies on liposome formulations for intra-articular delivery of clodronate" JOURNAL OF CONTROLLED RELEASE, ELSEVIER SCIENCE PUBLISHERS B.V. AMSTERDAM, NL, vol. 35, no. 2, August 1995 (1995-08), pages 145-154, XP004037485 ISSN: 0168-3659 page 146, column 2, line 23 - page 147, column 1, line 5</p>	6-8
Y	<p>YLITALO R: "Bisphosphonates and atherosclerosis" GENERAL PHARMACOLOGY, PERGAMON PRESS, OXFORD, GB, vol. 35, 2002, pages 287-296, XP002268656 ISSN: 0306-3623 the whole document</p>	6-8

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US2004/020487**Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos. ...  
because they relate to subject matter not required to be searched by this Authority, namely:  
Although claims 1-12 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the composition.
2. ☐ Claims Nos. ...  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos. ...  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 8.4(a).

**Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)**

This International Searching Authority found multiple inventions in this International application, as follows.

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is related to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No.

PCT/US2004/020487

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6139871 A	31-10-2000	US 6312719 B1	06-11-2001
		US 2004224011 A1	11-11-2004
		US 2002110587 A1	15-08-2002
		US 2002110588 A1	15-08-2002
US 2002192157 A1	19-12-2002	CA 2445826 A1	07-11-2002
		EP 1390077 A2	25-02-2004
		HU 0401127 A2	28-09-2004
		JP 2004530678 T	07-10-2004
		NO 20034855 A	19-12-2003
		NZ 529808 A	19-12-2003
		WO 02087424 A2	07-11-2002
DE 19637890 A	19-03-1998	DE 19637890 A1	19-03-1998



# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

REC'D 14 DEC 2004

WIPO

PCT

To:

see form PCTISA220

## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCTISA215 (second sheet)

Applicant's or agent's file reference

see form PCTISA220

### FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/JS2004/020437

International filing date (day/month/year)

24.06.2004

Priority date (day/month/year)

27.06.2003

International Patent Classification (IPC) or both national classification and IPC

A61K9/127, A61K31/066

Applicant

BIOREST LTD.

### 1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Prior art
- ☒ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☐ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability: citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

### 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1(a)(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCTISA220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCTISA220.

### 3. For further details, see notes to Form PCTISA220.

Name and mailing address of the ISA



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WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

international application No.  
PCT/US2004/020487

Box No. 1 Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
  - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:
    - ☐ a sequence listing
    - ☐ table(s) related to the sequence listing
  - b. format of material:
    - ☐ in written format
    - ☐ in computer readable form
  - c. time of filing/furnishing:
    - ☐ contained in the international application as filed.
    - ☐ filed together with the international application in computer readable form
    - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.  
PCT/JS2004/020487

Box No. II Priority

1. ☐ The following document has not been furnished:

☒ copy of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43bis.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. ☐ It has not been possible to consider the validity of the priority claim because a copy of the priority document was not available to the ISA at the time that the search was conducted (Rule 17.1). This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

4. Additional observations, if necessary:

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.  
PCT/US2004/020487

Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

- ☐ the entire international application,  
☒ claims Nos. 1-12, with respect to industrial applicability

because:

- ☒ the said international application, or the said claims Nos. 1-12, with respect to industrial applicability relate to the following subject matter which does not require an international preliminary examination (specify):

see separate sheet

- ☐ the description, claims or drawings (indicate particular elements below) or said claims Nos. are so unclear that no meaningful opinion could be formed (specify):
- ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
- ☒ no international search report has been established for the whole application or for said claims Nos. 1-12, with respect to industrial applicability
- ☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:
- |                            |  |
|----------------------------|--|
| the written form           | <input type="checkbox"/> has not been furnished            |
|                            | <input type="checkbox"/> does not comply with the standard |
| the computer readable form | <input type="checkbox"/> has not been furnished            |
|                            | <input type="checkbox"/> does not comply with the standard |
- ☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions.
- ☐ See separate sheet for further details

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.  
PCT/US2004/020487

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability, citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	6-9
	No: Claims	1-5, 9-12
Inventive step (IS)	Yes: Claims	
	No: Claims	1-12
Industrial applicability (IA)	Yes: Claims	
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item III

**Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

For the assessment of the present claims 1-12 on the question whether they are industrially applicable, no unified criteria exist in the PCT Contracting States. The patentability can also be dependent upon the formulation of the claims. The EPD, for example, does not recognize as industrially applicable the subject-matter of claims to the use of a compound in medical treatment, but may allow, however, claims to a known compound for first use in medical treatment and the use of such a compound for the manufacture of a medicament for a new medical treatment.

Re Item V

**Reasoned statement with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement**

1. Cited Documents

The following documents are referred to in this communication:

- D1: US-A-6 139 871 (HOPE MICHAEL J ET AL) 31 October 2000 (2000-10-31)
- D2: US 2002/192157 A1 (LOW PHILIP S ET AL) 19 December 2002 (2002-12-19)
- D3: DE 196 37 890 A (MAX PLANCK GESELLSCHAFT) 19 March 1998 (1998-03-19)
- D4: MONKKONEN J ET AL: "Studies on liposome formulations for intra-articular delivery of clodronate" JOURNAL OF CONTROLLED RELEASE, ELSEVIER SCIENCE PUBLISHERS B.V. AMSTERDAM, NL, vol. 35, no. 2, August 1995 (1995-08), pages 145-154, XP004037485 ISSN: 0168-3659
- D5: YLITALO R: "Bisphosphonates and atherosclerosis" GENERAL PHARMACOLOGY, PERGAMON PRESS, OXFORD, GB, vol. 35, 2002, pages 287-296, XP002268656 ISSN: 0306-3623

## 2. Clarity objection (Article 6 PCT)

Claim 1 does not meet the requirements of Article 6 PCT in that the matter for which protection is sought is not clearly defined.

Indeed, the functional statement "that decreases phagocytic cell activity" does not enable the skilled person to determine which technical features are necessary to perform the stated formulation.

## 3. Novelty

D1 discloses (see page 1, line 10-33) liposomes having a diameter of 100-150 nm which are used for treating atherosclerosis. The subject-matter of claims 1-5,9-12 is therefore not new (Article 33(2) PCT).

## 4. Inventive Step

Biphosphonate liposomes and in particular clodronate liposomes of 0,05 - 1,00 microns in size are well known from the prior art documents D2-D4:

D2 discloses (see example 3 on pages 5 and 6) the use of liposomes comprising clodronate and having a size of <100 nm as intraperitoneal injection composition for macrophage depletion.

D3 discloses (see the example and the claims) a liposomal medicament comprising a biphosphonic acid salt as active agent, contained in a liposomal shell consisting of cholesterol, DPPC, and DPPA in a ratio of 1-2.2-6:1-3. The liposomes having an average size of < 100nm can be injected intravenously and can be used for decreasing vascular repulsion of organs by vascular elimination of monocytes.

D4 discloses (see page 146, column 2, line 23 - page 147, column 1, line 5) Clodronate liposomes having a mean diameter of 160-180 nm.

In addition, biphosphonates are well known for inhibiting the development of atherosclerosis, as shown for example in document D5.

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING  
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/US2004/020487

It appears that the person skilled in the art would have applied the teaching of D5 to the liposomes of D2-D4 in order to use biphosphonate liposomes for treating atherosclerosis or any of its manifestations in end organ damage or related diseases such as unstable angina, impending or actual plaque rupture, or myocardial infarction.

Consequently, claims 6-8 do not appear to satisfy the criteria of inventive step (Article 33(3) PCT).

**5. Industrial applicability**

Claims 1-12 relate to subject-matter considered by this Authority to be covered by the provisions of Rule 67.1(iv) PCT. Consequently, no opinion will be formulated with respect to the industrial applicability of the subject-matter of these claims (Article 34(4)(a)(i) PCT).

Claims 6-11 satisfy the criterion of industrial applicability set forth in Article 33(4) PCT.